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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/532,400      03/22/00      HUME

J      042914.00700

EXAMINER

IM52/0508

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ART UNIT

PAPER NUMBER

6

1771

DATE MAILED:

05/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.

09/532,400

Applicant(s)

HUME, JAMES M

Examiner

Leanna Roche

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 18-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-17, drawn to a liner, classified in class 428, subclass 318.4.
  - II. Claims 18-21, drawn to a method for lining concrete structures, classified in class 156, subclass various.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, a cementitious mixture can be applied to a concrete infrastructure to create a continuous monolithic interior liner (USPN 5002438).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Soumit Roy on May 3, 2001 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-17. Affirmation of this election must be made by applicant in replying to this Office action.

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Claims 18-21 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

### ***Double Patenting***

5. Claims 1, 2, 5, 8-10, and 15 of this application conflict with claims 1-7 and 10 of Application No. 09/328328. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application.

Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

6. Claims 7, 11, 12, 14, 16, and 17 are also subject to double patenting under the interpretation applied by the examiner due to the 35 U.S.C. 112, second paragraph objections noted in Paragraphs 7, 12, 13 and 14.

### ***Claim Objections***

7. Claim 11 is objected to because of the following informalities: it appears that claim 11 should be dependent on claim 10, not claim 8. The examiner requests clarification of this interpretation.

### ***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 6 is drawn to a liner where the surfacer layer is composed of a foam. Claim 6 depends from claim 2 which requires that the surface layer be composed of an epoxy. The specification does not support a claim wherein the surfacer layer is both an epoxy and a foam.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 7, 12-14 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 7 recites the limitation "said foam" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. It appears that claim 7, as written, is not dependent from the proper claim. The examiner has searched this claim based on the interpretation that this claim should read: a bi-layer liner comprised of a surfacer layer made of a polyurethane foam and a barrier layer made of a polyurea and isocyanate blend.

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**13.** Claims 12 and 13 recite the limitation "said foam" in line 1 of each claim. There is insufficient antecedent basis for this limitation in each claim. It appears that claims 12 and 13 should depend from claim 11, which in turn should depend from claim 10. The examiner has searched this claim based on the interpretation that this claim should read: a multi-layer liner comprised of a surfacer layer of polyurethane foam (Claim 12) or a surfacer layer of polyurea foam (Claim 13) sandwiched between a first and second barrier layer.

**14.** Claims 14, 16, and 17 recite the limitation "said first barrier layer and said second barrier layer" in line 1 of each claim. There is insufficient antecedent basis for this limitation in each claim. It appears that claims 14, 16, and 17, as written, depend from the incorrect claim. The examiner has searched these claims with the interpretation that they depend from claim 10, not claim 8.

### ***Claim Rejections - 35 USC § 102***

**15.** The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**16.** Claims 1, 2, 5, 7-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hume et al. (USPN 5618616).

Hume is directed to a multi-layered liner that may be comprised of a primer layer, a first and second barrier layer and an intermediate foam layer where the foam layer is

sandwiched between the first and second barrier layer (Claim 1). The primer layer and first barrier layer read on Applicant's bi-layer liner comprised of a surfacer layer and a barrier layer. The primer layer of Hume may be comprised of an epoxy (Claim 5) which reads on Applicant's surfacer layer composed of an epoxy.

As described in Hume, the first and second barrier layers may be comprised of the same material (Claim 2). For example, the first and second barrier layers may be comprised of a polyurea and isocyanate blend (Claim 3).

If the first barrier layer of Hume and the intermediate foam layer of Hume are used to read on Applicant's claimed bi-layer liner comprised of a barrier layer and a surfacer layer, then the surfacer layer of Hume may be comprised of a foam. In this case, the foam layer may be comprised of polyurethane (Claim 4).

The first and second moisture barrier layers have cure rates of less than 60 seconds (Claim 9). Additionally, the first and second barrier layers are less than 80 mils in thickness (Claim 6).

The first and second barrier layer and the intermediate foam layer of Hume read on Applicant's claimed multi-layer liner comprised of a surfacer layer disposed between a first and second barrier layer. The intermediate foam layer being comprised of a polyurethane foam (Claim 4). The barrier layers being comprised of the same material, a polyurea and isocyanate blend. And the barrier layers being less than 80 mils in thickness and having cure rates less than 60 seconds.

With regard to claim 11, as written, the first barrier layer in combination with the intermediate foam reads on Applicant's claimed bi-layer comprised of a foam surfacer

with a barrier layer disposed on the surfacer layer. However, should claim 11 depend from claim 10, as explained in the claim objections (Paragraph 7), Hume still anticipates the claimed multi-layer liner comprised of a surfacer layer disposed between a first and second barrier layer, wherein the surfacer layer is comprised of a polyurethane foam (Claim 4).

Hume et al. anticipates Applicant's bi-layer liner because although the patent is directed to a multi-layered liner, the language of Applicant's claim 1, "a bi-layer liner comprising," does not exclude the presence of an additional layer and would therefore read on embodiments in which additional layers are present.

### ***Claim Rejections - 35 USC § 103***

**17.** The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**18.** Claims 1, 2, 5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hume et al. (USPN 5618616).

This is an alternative to the above 102(b) rejection. Hume et al. discloses the claimed invention except that it is directed to a multi-layered liner. It would have been an obvious matter of design choice to have eliminated one of the barrier layers, motivated by the desire to obtain a layer which exhibits barrier properties on only one surface of the foam layer. Such an embodiment would be desired where barrier



properties are not needed on one of the surfaces of the liner, i.e., when the liner is bonded to a wall of a container.

**19.** Claims 3, 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hume (USPN 5618616) in view of Grinshpun et al. (USPN 5955013).

Hume discloses the bi-layer and multi-layer liners claimed by Applicant as described above, but Hume does not disclose a bi-layer or multi-layer liner comprised of a surfacer layer made of an epoxy and barrier layers made of a foam, or more specifically, a polyurea foam. Grinshpun is directed to the production of a foam-containing structure useful for producing structures having insulating properties (Column 1 lines 14-21). Grinshpun discloses the use of polyurea foams for the foamed resin layer (Column 4 lines 54-64). Epoxies are used for the liquid second resin layer of the foamed structure (Column 6 lines 39-44). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Hume and Grinshpun, motivated by the desire to obtain a bi-layer or multi-layer liner which has enhanced insulating properties.

### ***Conclusion***

**20.** The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Strong (USPN 5002438) as it applies to the general state of the art.

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**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leanna Roche whose telephone number is 703-308-6549. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 703-308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



lmr  
May 4, 2001



**BLAINE COPENHEAVER  
PRIMARY EXAMINER**